(1) (1)

- 5. (Amended) The biomaterial as claimed in claim 1 [any one of the preceding claims], characterized in that it comprises several insolubilized dextran derivatives and/or several growth factors involved in the/bone reconstruction process.
- 6. (Amended) The biomaterial as claimed in <u>claim 1</u> [any one of the preceding claims], characterized in that it is insolubilized by crosslinking with the aid of a crosslinking agent.
- 8. (Amended) The biomaterial as claimed in <u>claim 1</u> [any one of the preceding claims], characterized in that it exists in the form of a hydrogel.
- 9. (Amended) The biomaterial as claimed in <u>claim 1</u> [any one of claims 1 to 7], characterized in that it exists in the form of a freeze-dried powder.
- 10. (Amended) The biomaterial as claimed in claim 9, characterized in that said freeze-dried powder is obtained from biomaterial existing in the form of a [the] hydrogel [defined in claim 8].
- 11. (Amended) The biomaterial as claimed in claim 1 [any one of the preceding claims], characterized in that it comprises, in addition, a tissue filling material.
- 13. (Amended) The biomaterial as claimed in claim 11 [or claim 12], characterized in that said tissue filling material is selected from the group consisting of collagen, gelatin, biological adhesive, polymers of polylactic or polyglycolic acids, and copolymers of polyethylene glycol and polylactide-co-glycolide.
- 14. (Amended) The biomaterial as claimed in claim 11 [or claim 12], characterized in that said tissue filling material is an osteoconductive material selected from the group consisting of coral, hydroxyapatite, a mixture of collagen and hydroxyapatite, tricalcic calcium phosphate, calcium sulfate, and calcium carbonate.

MARI

15. (Amended) A process for preparing the folid biomaterial as claimed in claim 1 [any one of claims 1 to 11 and 13], characterized in that the process [it] comprises the following steps:

crosslinking of at least one dextran derivative of general formula DMC<sub>a</sub>B<sub>b</sub>Su<sub>c</sub>S<sub>d</sub> as defined in claim 1 or claim 2,

adsorption, in the insolubilized dextran derivative obtained above, of at least one growth factor as defined in any one of claims 1 to 4,

production of a solid biomaterial according to any one of claims 1 to 8 in the form of a hydrogel,

optionally, the freeze-drying of said hydrogel in order to obtain said biomaterial in the form of a powder.

- 16. (Amended) The process as claimed in claim 15, characterized in that said crosslinking of at least one dextran derivative of general formula DMC<sub>a</sub>B<sub>b</sub>Su<sub>c</sub>S<sub>d</sub> is carried out with the aid of a crosslinking agent [as defined in claim 6 or claim 7] selected from the group consisting of sodium trimetaphosphate, epichlorohydrin, divinyl sulfone, gluteraldehyde and bisepoxiranes.
- 17. (Amended) The process as claimed in claim 15 [or claim 16], characterized in that the crosslinking of at least one dextran derivative of general formula DMC<sub>a</sub>B<sub>b</sub>Su<sub>c</sub>S<sub>d</sub> is carried out in the presence of a tissue filling material.
- 18. (Amended) The process as claimed in claim 17, characterized in that said tissue filling material is [as defined in claim 13 or claim 14] selected from the group consisting of collagen, gelatin, biological adhesive, polymers of polylactic or polyglycolic acids, copolymers of polyethylene glycol and polylactide-co-glycolide, and an osteoconductive material selected from the group consisting of coral, hydroxyapatite, a mixture of collagen and hydroxyapatite, tricalcic calcium phosphate, calcium sulfate, and calcium carbonate.
- 19. (Amended) A process for preparing the biomaterial as claimed in claim 12, characterized in that it comprises the following steps:

bringing the dextran derivative into contact with particles of an inorganic or polymeric insoluble support, as defined in claim 12, so as to obtain a composite,

insolubilization of the composite obtained above, in the presence of a crosslinking agent,

- adsorption, in the insolubilized composite obtained above, of at least one of said growth factors [as defined in claims 1 to 4].
- 20. (Amended) The use of the solid biomaterial as claimed in <u>claim 1</u> [any one of claims 1 to 14] for the preparation of a repair or filling material for osteoarticular, dental or maxillofacial applications.
- 21. (Amended) The use of the solid biomaterial as claimed in claim 20 for the preparation of osteoarticular, dental or maxillofacial implants.
- 22. (Amended) The use of a solid biomaterial as claimed in <u>claim 1</u> [any one of claims 1 to 14] for the preparation of a coating for orthopedic, dental or maxillofacial prostheses.
- 23. (Amended) A functionalized prosthesis, characterized in that at least part of its surface is coated with a solid biomaterial as claimed in claim 1 [any one of claims 1 to 14].

## **Correspondence Address**

All future correspondence concerning the above-identified U.S. patent application should be addressed to the undersigned attorney at the following address:

Thomas W. Tolpin Welsh & Katz, Ltd. 22nd Floor 120 South Riverside Plaza Chicago, IL 60606 Phone: (312) 655-1500 Fax: (312) 655-1501

4